

## CLAIMS

What is claimed is:

- 1           1.     An apparatus comprising:  
2                 a receiver to receive a default stream and N restart sub-streams from a  
3                 transmitter over a transmission path, N being an integer equal to at least 1 and selected  
4                 according to a selection, the default stream being coded by a multiple description (MD)  
5                 coding, the N restart sub-streams being coded by a predictive coding and sampled  
6                 according to a sampling pattern, the default and N restart sub-streams corresponding to  
7                 a media content; and  
8                 a selector coupled to the receiver to select a receiving frame from the default  
9                 stream and one of the N restart sub-streams according to a loss status in the default  
10                stream.
- 1           2.     The apparatus of claim 1 further comprising:  
2                 a decoder to decode the receiving frame.
- 1           3.     The apparatus of claim 1 wherein the selector selects the receiving frame  
2                 from the one of the N restart sub-streams when the loss status indicates there is a lost  
3                 frame in the default stream.
- 1           4.     The apparatus of claim 3 wherein the selector selects the receiving frame  
2                 from one of the N restart sub-streams, the selected receiving frame being nearest to the  
3                 lost frame and belonging to same description as the lost frame.
- 1           5.     The apparatus of claim 4 wherein the selector selects the default stream  
2                 when the loss status indicates there is no lost frame in the default stream.
- 1           6.     The apparatus of claim 4 wherein the selector selects the default stream  
2                 after the receiving frame from the one of the N restart sub-stream is selected.
- 1           7.     The apparatus of claim 1 wherein the selection is based on at least one of  
2                 bandwidth and loss rate of the transmission path.

1           8.       The apparatus of claim 1 wherein the sampling pattern is a non-  
2 overlapping pattern or having frames from each description of the MD coding.

1           9.       The apparatus of claim 1 wherein at least one of the default stream and  
2 the N restart sub-streams corresponds to a layered representation of the frames  
3 according to an encoding rate.

1           10.      An apparatus comprising:  
2 a transmitter to transmit a default stream and N restart sub-streams to a plurality  
3 of receivers over a plurality of transmission paths, N being an integer equal to at least 1  
4 and selected according to a selection at the receivers, the default stream being coded by  
5 a multiple description (MD) coding, the N restart sub-streams being coded by a  
6 predictive coding and sampled according to a sampling pattern, the default and N  
7 restart sub-streams corresponding to a media content.

1           11.      The apparatus of claim 10 wherein at least one of the default stream and  
2 the N restart sub-streams corresponds to a layered representation of the frames  
3 according to an encoding rate.

1           12.      A method comprising:  
2 receiving a default stream and N restart sub-streams from a transmitter over a  
3 transmission path, N being an integer equal to at least 1 and selected according to a  
4 selection, the default stream being coded by a multiple description (MD) coding, the N  
5 restart sub-streams being coded by a predictive coding and sampled according to a  
6 sampling pattern, the default and N restart sub-streams corresponding to a media  
7 content; and  
8 selecting a receiving frame from the default stream and one of the N restart sub-  
9 streams according to a loss status in the default stream.

1           13.      The method of claim 12 further comprising:  
2 decoding the receiving frame.

1           14.      The method of claim 12 wherein selecting comprises selecting the one  
2 of the N restart sub-streams when the loss status indicates there is a lost frame in the  
3 default stream.

1           15.     The method of claim 14 wherein selecting comprises selecting the  
2 receiving frame from one of the N restart sub-streams, the selected receiving frame  
3 being the nearest to the lost frame and belonging to same description of the lost frame.

1           16.     The method of claim 15 wherein selecting comprises selecting the  
2 default stream when the loss status indicates there is no lost frame in the default stream.

1           17.     The method of claim 15 wherein selecting comprises selecting the  
2 default stream after the receiving frame from the one of the N restart sub-streams is  
3 selected.

1           18.     The method of claim 12 wherein the selection is based on at least one of  
2 bandwidth and loss rate of the transmission path.

1           19.     The method of claim 12 wherein the sampling pattern is a non-  
2 overlapping pattern or having frames from each description of the MD coding.

1           20.     The method of claim 12 wherein at least one of the default stream and  
2 the N restart sub-streams corresponds to a layered representation of the frames.

1           21.     A method comprising:  
2 transmitting a default stream and N restart sub-streams to a plurality of receivers  
3 over a plurality of transmission paths, N being an integer equal to at least 1 and selected  
4 according to a selection at the receivers, the default stream being coded by a multiple  
5 description (MD) coding, the N restart sub-streams being coded by a predictive coding  
6 and sampled according to a sampling pattern, the default and N restart sub-streams  
7 corresponding to a media content.

1           22.     The method of claim 21 wherein at least one of the default stream and  
2 the N restart sub-streams corresponds to a layered representation of the frames  
3 according to an encoding rate.

1           23.     An article of manufacture comprising:  
2 a machine-accessible medium including data that, when accessed by a machine,  
3 causes the machine to perform operations comprising:

4 receiving a default stream and N restart sub-streams from a transmitter over a  
5 transmission path, N being an integer equal to at least 1 and selected according to a  
6 selection, the default stream being coded by a multiple description (MD) coding, the N  
7 restart sub-streams being coded by a predictive coding and sampled according to a  
8 sampling pattern, the default and N restart sub-streams corresponding to a media  
9 content; and  
10 selecting a receiving frame from the default stream and one of the N restart sub-  
11 streams according to a loss status in the default stream.

1 24. The article of manufacture of claim 23 further comprising data that  
2 cause the machine to perform operations comprising:  
3 decoding the receiving frame.

1 25. The article of manufacture of claim 23 wherein the data causing the  
2 machine to perform selecting comprises data that cause the machine to perform  
3 operations comprising selecting the receiving frame from the one of the N restart sub-  
4 streams when the loss status indicates there is a lost frame in the default stream.

1 26. The article of manufacture of claim 25 wherein the data causing the  
2 machine to perform selecting comprises data that cause the machine to perform  
3 operations comprising selecting the receiving frame, the selected receiving frame being  
4 nearest to the lost frame and belonging to same description as the lost frame.

1 27. The article of manufacture of claim 26 wherein the data causing the  
2 machine to perform selecting comprises data that cause the machine to perform  
3 operations comprising selecting the default stream when the loss status indicates there  
4 is no lost frame in the default stream.

1 28. The article of manufacture of claim 26 wherein the data causing the  
2 machine to perform selecting comprises data that cause the machine to perform  
3 operations comprising selecting the default stream after the receiving frame from the  
4 one of the N restart frames is selected.

1 29. The article of manufacture of claim 23 wherein the selection is based on  
2 at least one of bandwidth and loss rate of the transmission path.

1           30.     The article of manufacture of claim 23 wherein the sampling pattern is a  
2 non-overlapping pattern or having frames from each description of the MD coding.

1           31.     The article of manufacture of claim 23 wherein at least one of the  
2 default stream and the N restart sub-streams corresponds to a layered representation of  
3 the frames.

1           32.     An article of manufacture comprising:  
2           a machine-accessible medium including data that, when accessed by a machine,  
3 causes the machine to perform operations comprising:  
4           transmitting a default stream and N restart sub-streams to a plurality of receivers  
5 over a plurality of transmission paths, N being an integer equal to at least 1 and selected  
6 according to a selection at the receivers, the default stream being coded by a multiple  
7 description (MD) coding, the N restart sub-streams being coded by a predictive coding  
8 and sampled according to a sampling pattern, the default and N restart sub-streams  
9 corresponding to a media content.

1           33.     The article of manufacture of claim 21 wherein at least one of the  
2 default stream and the N restart sub-streams corresponds to a layered representation of  
3 the frames according to an encoding rate.

1           34.     An apparatus comprising:  
2           means for receiving a default stream and N restart sub-streams from a  
3 transmitter over a transmission path, N being an integer equal to at least 1 and selected  
4 according to a selection, the default stream being coded by a multiple description (MD)  
5 coding, the N restart sub-streams being coded by a predictive coding and sampled  
6 according to a sampling pattern, the default and N restart sub-streams corresponding to  
7 a media content; and  
8           means for selecting a receiving frame from the default stream and one of the N  
9 restart sub-streams according to a loss status in the default stream.

1           35.     The apparatus of claim 34 further comprising:  
2           means for decoding the receiving frame.

3           36.     The apparatus of claim 34 wherein the means for selecting selects the  
4     receiving frame from the one of the N restart sub-streams when the loss status indicates  
5     there is a lost frame in the default stream.

1           37.     The apparatus of claim 36 wherein the means for selecting selects the  
2     receiving frame, the selected receiving frame being nearest to the lost frame and  
3     belonging to same description as the lost frame.

1           38.     The apparatus of claim 37 wherein the means for selecting selects the  
2     default stream when the loss status indicates there is no lost frame in the default stream.

1           39.     An apparatus comprising:  
2         means for transmitting a default stream and N restart sub-streams to a plurality  
3     of receivers over a plurality of transmission paths, N being an integer equal to at least 1  
4     and selected according to a selection at the receivers, the default stream being coded by  
5     a multiple description (MD) coding, the N restart sub-streams being coded by a  
6     predictive coding and sampled according to a sampling pattern, the default and N  
7     restart sub-streams corresponding to a media content.

1           40.     The apparatus of claim 39 wherein at least one of the default stream and  
2     the N restart sub-streams corresponds to a layered representation of the frames  
3     according to an encoding rate.